

CLAIM OR CLAIMS

1. A surgical suturing instrument comprising:
 - (a) an elongated shaft;
 - (b) a tissue engaging gap formed proximal to an end of the shaft;
 - (c) a needle reciprocally movable across the gap from a proximal end of the gap to a distal end of the gap;
 - (d) the needle having a ferrule engaging tip
 - (e) a ferrule receiving aperture at a distal end of the gap for selectively holding and releasing the ferrule so that in a first mode, the needle engages the ferrule and draws a suture across the gap, and in a second mode, the ferrule is retained in the aperture and the needle separates from the ferrule and is retracted across the gap leaving the ferrule in the aperture.
2. The surgical suturing instrument of claim 1 comprising a stripper engaging the ferrule in the second mode and retaining the ferrule in the aperture.
3. The surgical suturing instrument of claim 2 in which the stripper extends from the proximal end of the gap across the gap to the distal end of the gap.
4. The surgical suturing instrument of claim 3 comprising a camming surface adjacent the ferrule receiving aperture guiding an end of the stripper into engagement with the ferrule for holding the ferrule in the aperture and allowing the needle to be withdrawn from the ferrule.
5. The surgical suturing instrument of claim 4 in which the camming surface comprises an alignment ramp angled towards a proximal end of the ferrule.
6. The surgical suturing instrument of claim 1 comprising: a handle.

7. The surgical suturing instrument of claim 6 comprising a needle actuator on the handle for selectively advancing and retracting the needle across the gap.

8. The surgical suturing instrument of claim 7 comprising a spring biasing the needle actuator to a needle retracted position.

9. The surgical suturing instrument of claim 8 in which the needle actuator is pivotally mounted to the handle.

10. The surgical suturing instrument of claim 7 comprising a stripper actuator on the handle for selectively advancing and retracting the stripper across the gap.

11. The surgical suturing instrument of claim 10 in which the stripper actuator comprises a push button.

12. The surgical suturing instrument of claim 11 in which the push button comprises a thumb operated button.

13. The surgical suturing instrument of claim 12 comprising a spring biasing the stripper actuator to a retracted position.

14. The surgical suturing instrument of claim 10 in which the stripper actuator is coupled to the needle actuator.

15. The surgical suturing instrument of claim 14 comprising a spring lock for locking the stripper in an extended position engaging the ferrule.

16. The surgical suturing instrument of claim 15 in which the needle actuator releases the spring lock after the needle has been withdrawn from the ferrule.

17. The surgical suturing instrument of claim 1 in which the needle has an unsymmetrical cross section.

18. The surgical suturing instrument of claim 17 comprising a means for rotating the needle between a first rotational position in the first mode and a second rotational position in the second mode.

19. The surgical suturing instrument of claim 18 comprising a ferrule latch activated by the needle for selectively retaining the ferrule in the gap.

20. The surgical suturing instrument of claim 1 comprising a clamp for retaining the ferrule in the ferrule receiving aperture in the second mode and releasing the ferrule in the first mode.

21. The surgical suturing instrument of claim 20 comprising a clamp activator reciprocally movable to engage the clamp to cause it to retain the ferrule in the ferrule receiving aperture in the second mode and release the ferrule in the first mode.

22. A surgical suturing instrument for placing multiple suture loops comprising:

- (a) an elongated shaft;
- (b) a reciprocating suture pickup member mounted on said shaft;
- (c) a suture holder engaged by said reciprocating suture pick up member for selectively coupling a suture to the pick up member for drawing the suture through a first tissue section and releasing the suture from the pick up member for repeated coupling and drawing the suture through a second tissue section spaced from the first tissue section.

23. The surgical suturing instrument of claim 22 comprising a stripper selectively engaging a suture holding member for releasing the suture from the pickup member.

24. The surgical suturing instrument of claim 23 in which the stripper comprises a reciprocating member selectively movable into a position for stripping the suture from the pickup member.

25. The surgical suturing instrument of claim 24 in which the stripper extends from the proximal end of the gap across the gap to the distal end of the gap.

26. The surgical suturing instrument of claim 24 comprising a camming surface adjacent the ferrule receiving aperture guiding an end of the stripper into engagement with the ferrule for holding the ferrule in the aperture and allowing the needle to be withdrawn from the ferrule.

27. The surgical suturing instrument of claim 24 in which the camming surface comprises an alignment ramp angled towards a proximal end of the ferrule.

28. The surgical suturing instrument of claim 26 comprising a needle actuator on the handle for selectively advancing and retracting the needle across the gap.

29. The surgical suturing instrument of claim 28 comprising a spring biasing the needle actuator to a needle retracted position.

30. The surgical suturing instrument of claim 29 comprising a stripper actuator on the handle for selectively advancing and retracting the stripper across the gap.

31. The surgical suturing instrument of claim 30 in which the stripper actuator is coupled to the needle actuator.

32. A surgical suturing instrument comprising:
(a) a reciprocating tissue penetrating member;
(b) a suture holder;
(c) means for alternately coupling the reciprocating tissue penetrating member to the suture holder for drawing a length of suture through a tissue section and releasing the reciprocating tissue penetrating member from the suture holder.

33. The surgical suturing instrument of claim 32 comprising a squeezable handle coupled to the reciprocating tissue penetrating member for reciprocating the tissue penetrating member.

34. The surgical suturing instrument of claim 32 comprising a stripper for holding the suture holder and allowing the reciprocating tissue penetrating member to separate therefrom.

35. The surgical suturing instrument of claim 34 in which the stripper is coupled to the squeezable handle.

36. The surgical suturing instrument of claim 34 comprising a plunger coupled to the stripper.

37. A method of closing a wound comprising:

- (a) disposing a suture on one side of a section of tissue proximal to the wound;
- (b) passing a needle through the section of tissue proximal to the wound;
- (c) capturing the suture with the needle;
- (d) drawing the suture through the section of tissue;
- (e) releasing the suture from the needle; and
- (f) repeating steps b-e.

38. The method of claim 37 in which the suture has a ferrule attached to an end of the suture, and in which the step of capturing the suture with a needle comprises engaging the suture with an end of the needle.

39. The method of claim 37 comprising repeating steps b-e to form a figure 8 knot.

40. The method of claim 37 comprising repeating steps b-e to form a running stitch.

41. The method of claim 39 comprising securing the ends of the suture together to form the knot.

42. The method of claim 40 comprising independently securing each end of the suture forming the running stitch.

43. The method of claim 42 in which securing each end of the suture comprises passing at least one end through a bolster and securing the end with the bolster disposed between the end and the wound.

44. A method of securing a suture at a wound site comprising passing the end of the suture through a bolster and securing the suture with the bolster disposed between the end of the suture and the wound.

45. The method of claim 44 comprising securing a section of a second suture to the bolster, and securing the suture and the second suture together at a location on the opposite side of the bolster from the wound.